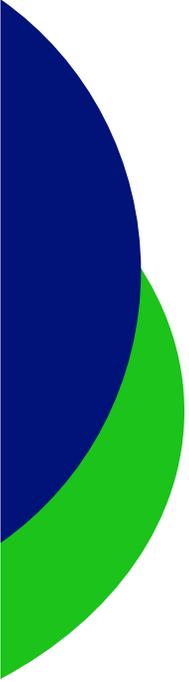


# **Sustainability at Dominion**

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**VCU Energy & Sustainability Conference**  
**January 30, 2013**

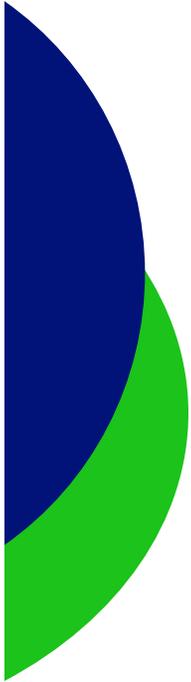
Donna Kelliher, Director Travel & Corporate Services  
Dominion



# How Do We Define Sustainability?

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- Dominion's sustainability initiatives are focused around four broad focus areas:
  - Reducing our environmental footprint
  - Investing in the technologies of tomorrow
  - Providing green opportunities for our customers and communities
  - Engaging our employees and stakeholders

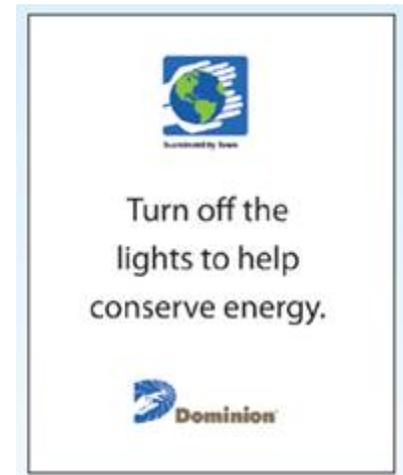


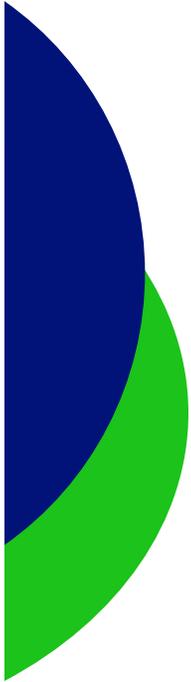
# Reducing our Footprint

## What are we doing?

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- Spent \$2.9 billion on environmental improvements since 1998 on our generating fleet – 2020 emissions of sulfur dioxide and mercury down by 91 percent and nitrous oxides down by 84 percent.
- 4 LEED Buildings (2 new and 2 existing)
- Biodiesel based transportation company, BioRide, is now a preferred provider in Richmond area.
- Internal energy audits conducted by trained volunteer employee group
- Increased use of green products in cafeterias
- Set goal to green passenger vehicle fleet
- Set goal to use best management practices to minimize SF6
- Developed “turn off the lights” stickers





# Alternative Vehicles & Fuels

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- Plug-in Hybrid Electric Vehicles  
1-Chevy Volt, 3-Retrofitted Prius
- Two Hybrid Aerial Lift Trucks  
Servicing power lines (DVP)
- Plug-in Electric Vehicle  
1 Nissan Leaf
- Natural Gas Vehicles (NGV's)  
Dominion Energy Unit has ~300 natural gas vehicles (light/med duty pick-up trucks). The compressed natural gas fueling these vehicles displaces the equivalent of 360,000 gallons of gasoline annually

# Reducing our Footprint: CSR & Travel

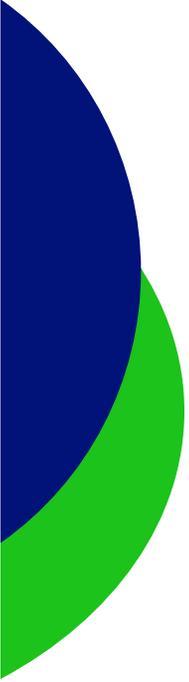


## Travel Related Policies

- Economic
  - Investment, procurement, reporting, accounting
- Environment
  - Carbon footprint of air, car, hotel travel and meetings
- Social
  - Duty of care, well-being, life-balance, community



***Project ICARUS: The leading voice for sustainability in travel and meetings, globally***



# Travel, Technology & CSR

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- Calculating the CO2 footprint
  - Influencing decisions point of sale
  - Reporting and forecasting
- Demand management
  - Virtual meetings and technology
  - Dynamic messaging
  - Supplier highlighting & policy
- Procurement
  - Sustainable supplier selection and highlighting
- Paperless travel management
  - Mobile solutions

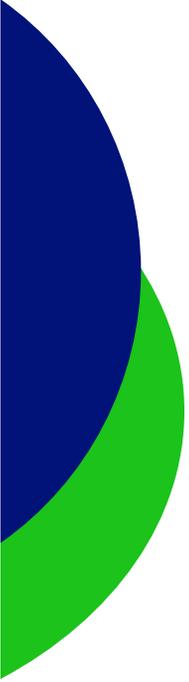
# Responsible Procurement

## Travel Opportunities & Metrics

| Airline  | Hotel   | Car Rental  |
|--|---|---|
| Average age of fleet   | Water consumption in liters per day per room let                                | Average age of fleet  |
| Kerosene consumption in tons                                   | Energy consumption in kWh per year per room                                     | CO2 emissions of the fleet per 100 miles per category and engine type |
| CO2 emissions per 100 passenger miles                          | Carbon emissions in tons CO2 per year per room                                  |   |
| Waste generated in kilograms per passenger                     | Waste generated in kilograms per year per room                                  |   |
| Percentage of waste recycled                                   | Percentage of waste recycled  |   |
| Energy consumption on the ground                               | Average percentage of energy consumption from renewable energy                  |   |
| Average percentage of energy consumption from renewable energy | Percentage of locally sourced products on sale at the property incl. restaurant |   |

Sample Metrics



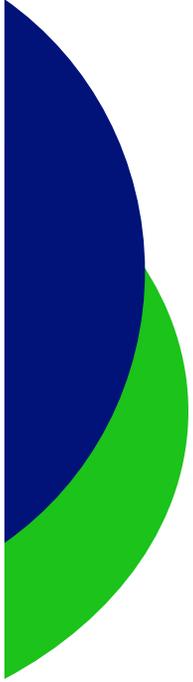


# Investing in Technologies of Tomorrow

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**Alternative Energy Solutions (AES) group formed in 2009 identifies potential alternative energy resource and technology opportunities for Dominion's business units. AES serves as a hub for all things related to green and emerging technology research.**

- Offshore Wind Demonstration Facility: DOE selected a company-led team to begin award negotiations for initial engineering, design and permitting for an offshore wind turbine demonstration facility off the coast of Virginia.  
<http://dom.mediaroom.com/2012-12-12-Dominion-Virginia-Power-Welcomes-First-Round-Selection-For-Offshore-Wind-Turbine-Demonstration-Facility>
- We have added 365 MW of renewable energy into our generation fleet (Pittsylvania and 2 wind projects) since 2004.
- Conversion underway for 3 coal-fired Virginia generating stations to biomass. Will add 153 MW of renewable energy.
- Building state of the art natural gas combined cycle facilities
  - Warren, Brunswick.

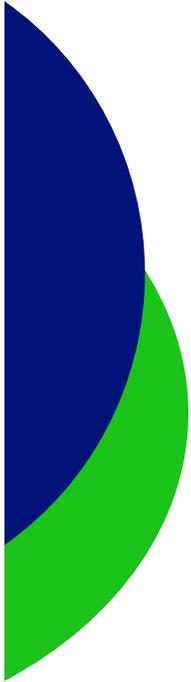


## **Investing in Technology: Energy Conservation**

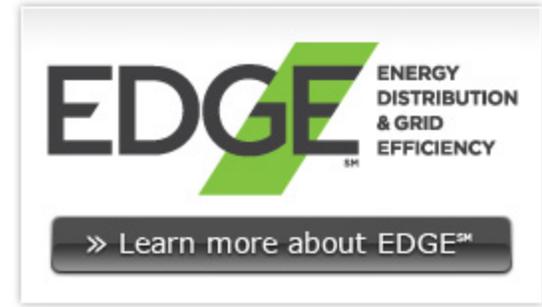
### **Providing Green Opportunities For Our Customers**

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- Online tools provided to consumers on our web site - short “how to” video clips on energy saving tips, home energy calculator and Dominion’s Energy Conservation Blog
- Smart meters installed in portions of northern VA, Midlothian and Charlottesville with continued expansions to portions of Williamsburg, downtown Richmond and Blue Ridge



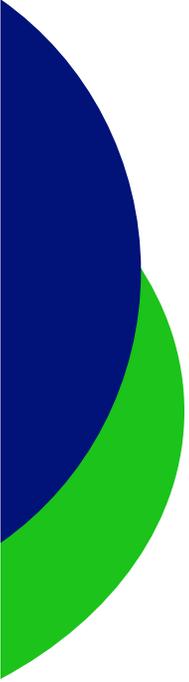
# Dominion Voltage, Inc



We work with other Dominion business units to develop sustainable alternative energy solutions.

- **Our grid-side efficiency programs:**
- Require no change in customer behavior.
- Deliver savings without in-home equipment purchases or incentive payments.
- Benefit all customer classes.
- Leverage your investment in Advanced Metering Infrastructure.
- Complement your planning tools and processes to dial-in your business case.
- Are compatible with other direct load control programs.
- Control voltage and calculate savings based upon measurements.
- Give visibility of what's really happening at the customer premise.

For more information about DVI, visit the website at [www.dvigridsolutions.com](http://www.dvigridsolutions.com).

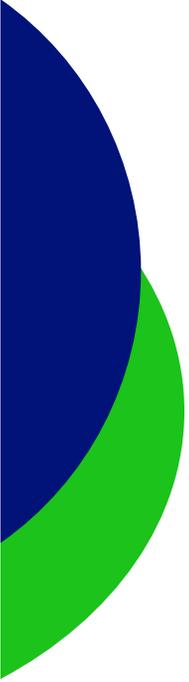


## Providing Green Opportunities For Our Customers & Communities:

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Dominion & The Dominion Foundation gave more than \$21.3 million in 2012 for various programs including environmental stewardship. A few examples:

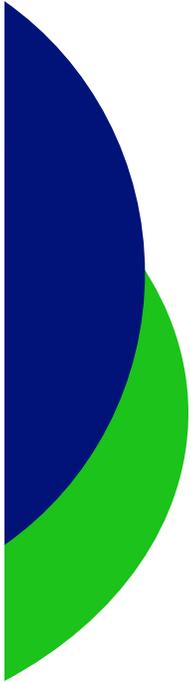
- Presented George Mason University with \$35,000 in support of the **Mason Sustainability Institute**
- **Project Plant It!** Launched in 2007 to raise student awareness about the importance of caring for and planting trees – has distributed more than 130,000 tree seedlings to elementary school students in nine states
- **Land Conservation:** Land donations & charitable grants totaling more than \$2.5 million. Central Appalachian Highlands
  - **The Trust for Public Land: “Pleasure House Point” land acquisition,**
- **Protecting Water Resources:** Maryland Artificial Reef Initiative
- Dominion Riverrock -- outdoor lifestyle festival



# Providing Green Opportunities For Our Customers & Communities

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- Dominion offers its customer in VA and NC opportunity to participate in green power programs
- Operate electric demand side management programs (DSM) in VA and NC:
  - Home Energy Audits
  - Smart Cooling Rewards
  - Commercial Lighting Program
  - Commercial HVAC Upgrade Program
- Received regulatory approval in May 2012 to add a bundled package of four residential and three commercial programs for a five-year period to our existing conservation offerings. New programs include:
  - **Residential:** Home Energy Check-Up, Duct Testing & Sealing, Heat Pump Tune-Up, Heat Pump Upgrade
  - **Commercial:** Energy Audit, Duck Testing & Sealing, Distributed Generation



# Renewable Energy Portfolio

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We currently have renewable energy assets in Virginia, North Carolina, West Virginia, Indiana and Illinois that include wind, hydro and wood biomass. We are evaluating additional opportunities to harness the wind, sun and biomass resources.

When completed and fully operational, the combined output of our existing and planned renewable facilities could produce at full power more than 1,600 megawatts of clean energy – enough to supply more than 400,000 typical homes.

In 2011, hydroelectric power provided almost half (47 percent) of our operational renewable energy capacity. Wind power accounted for about 41 percent of the total, with the remaining 12 percent coming from wood biomass.

# Customer Renewable Options



## Solar Partnership Program

- DVP-owned solar assets hosted by large commercial customers
- Size of the systems .5 MW to 2 MW
- Demonstration program to assess benefits and impacts of solar generation on Dominion's distribution system



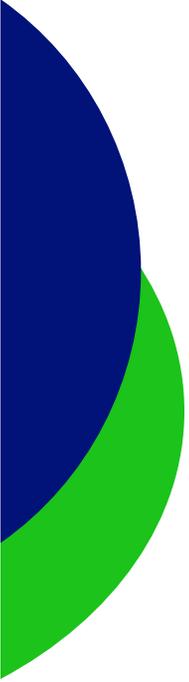
## Solar Purchase Program

- New tariff to purchase customer-owned solar generation (capped at 3 MW)
- Designed to match voluntary Green Power participants with VA solar generators
- Residential and small commercial customers will sell solar generation to Dominion
- Fixed price for 5 years during the demonstration program



## Schedule RG

- Option for large commercial customers and non-jurisdictional customers
- Designed to be a blended rate of renewable and conventional generation sources (3rd party or Dominion owned)



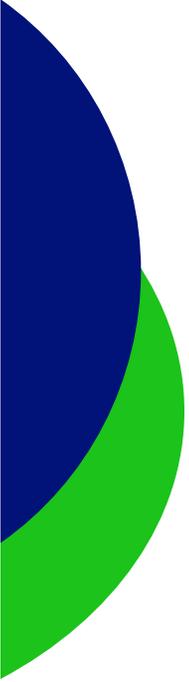
# Biodiversity & Habitat Protection

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The protection of species and habitats on the lands, rights-of-way, and waterways around our facilities is an integral part of our commitment to responsible environmental stewardship. Some of our projects and partnerships include:

- Avian & Wildlife Protection
- Wildlife Preservation
- Rare Plant Protection
- Land Conservation

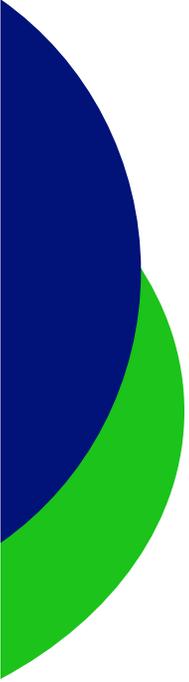
[http://www.dominioncsr.com/environment/biodiversity\\_habitat\\_protection.php](http://www.dominioncsr.com/environment/biodiversity_habitat_protection.php)



# Engaging Our Employees

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- Created Director of Sustainability position, Staff Level Sustainability Team, Executive Sustainability Council
- Pre-existing Nuclear Green Team
- Created [sustainability@dom.com](mailto:sustainability@dom.com)
- Created a Sustainability Speaker Series
- Dominion employees volunteered over 130,000 hours in 2012 on community projects
- Celebrating Earth day for Dominion employees at OJRP as a pilot for Dominion – April 17, 2013
- Published multiple Connect/Connect Today articles to raise awareness & educate employees



# Engaging Stakeholders

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- Excellent Corporate Social Responsibility/Sustainability Report <http://www.dominioncsr.com/>
- Well respected IRP Stakeholder process
- Governor McDonnell hosted a round table discussion on Corporate Sustainability – Dominion participated
- Jointed VMA's Sustaining Virginia program, EPA's Natural Gas Star program (DTI), EPRI Sustainability Interest Group, Arbor Day Foundation's Tree Line USA program (DVP)
- Created [sustainability@dom.com](mailto:sustainability@dom.com)
- Completed Water Carbon Disclosure Project survey and added of water metrics to [www.dom.com](http://www.dom.com)